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**From:** CC Grisham <grish@me.com>  
**Sent:** Friday, February 13, 2015 12:28 PM  
**To:** keogh@adeq.state.ar.us  
**Cc:** Charles Curtis Grisham Jr.; spencer@adeq.state.ar.us; benefield@adeq.state.ar.us; Carpenter, Ellen; shafii@adeq.state.ar.us; Benenati, Katherine; hynum@adeq.state.ar.us; Tzhone, Stephen; Sanchez, Carlos; Meyer, John; Murray, Suzanne; katie.beck@governor.arkansas.gov; philip\_moore@bozeman.senate.gov; tom\_cotton@cotton.senate.gov  
**Subject:** Fwd: Arkwood - Pentachlorophenol | Pesticides | US EPA  
**Attachments:** pentachlorophenol\_red.pdf; ATT00001.htm; 980130ArjmandiLetterARstandardH2O.pdf; ATT00002.htm; 9383907-2.pdf; ATT00003.htm; 20120214 Clem to Ghose re revised H2O standard.pdf; ATT00004.htm; 20121218 Mescher regarding ADEQ & H2O copy.pdf; ATT00005.htm; 20120713 Moix to Tzhone re H2O standard ~15 ugl.pdf; ATT00006.htm; Penta - Basic Information about Pentachlorophenol in Drinking Water Basic Information about Regulated Drinking Water Contaminants US EPA.pdf; ATT00007.htm; 2002\_12\_30\_criteria\_wqctable\_hh\_calc\_matrix.pdf; ATT00008.htm; 20130822 CCGJr H2O cleanup standard agenda item.pdf; ATT00009.htm

Dear Director Keogh:

I forward for your notice the below email message, with its original attachments, which I sent in 2013 to Stephen L. Tzhone, Superfund Remedial Project Manager, EPA Region 6 and to Tammie J. Hynum, Chief, ADEQ Hazardous Waste Division.

The below message carefully details a crucial issue affecting the return to productive use — **and creating jobs for Arkansans** — at the Arkwood Superfund site in Boone County.

Yet, the issue I labored long and hard to detail below and elsewhere has not been resolved or even addressed by ADEQ since the time of my writing this summary in advance of the meeting I requested with EPA Region 6, which was held in Dallas on September 5, 2013.

I received a telephone call this morning from Mo Shafii, Assistant Chief, ADEQ Water Division, who said he was calling me at the behest of Ellen Carpenter, Chief, ADEQ Water Division, to respond to my recent message requesting a call from her.

I find it very difficult to communicate on the telephone with Mr. Shafii, due to the language barrier that exists between us.

However, one thing I did understand clearly was Mr. Shafii's statement that he had "**no clue**" as to the policies of the Hazardous Waste Division at ADEQ.

Mr. Shafii claimed that he himself provided the numbers to ADEQ engineer Masoud Arjmandi, which Mr. Arjmandi used in his 1998 letter (attached) that set the water cleanup standard for the Arkwood Superfund site.

Mr. Shafii stated to me that he has no idea what the Hazardous Waste Division did or does because he does not work in that division.



I said that, even though I do not work at ADEQ at all, I still knew at least something about the policy of the Hazardous Waste Division regarding this matter.

Mr. Shafii then aggressively challenged me: **"What is it then? What is the policy of the Hazardous Waste Division?"**

I said that, in part, the Hazardous Waste Division's policy was to consult with the Water Division in setting the water cleanup standard for the Arkwood Superfund site, as evidenced by the 1998 letter for which Mr. Shaffi himself provided the data.

I found Mr. Shafii's contentiousness toward me — a member of the public with legitimate questions and concerns — to be both unnecessary and inappropriate.

I also found it shocking that Mr. Shafii claims to the public to "have no clue" as to the policies of another division, to which his division has major policy-setting input, at the State agency where he has worked as a senior manager for many years.

I asked Mr. Shafii if the various divisions at ADEQ did not work together.

Mr. Shafii said that the different divisions at ADEQ do work together but that, if the Hazardous Waste Division had changed the water cleanup standard at Arkwood since his determination of that standard in 1998, he didn't know anything about it and that I would **"have to ask the Hazardous Waste Division."**

The below is but one example of my repeated attempts to "ask the Hazardous Waste Division" (in that instance the Division Chief, Tammie J. Hynum) about the matter, but to no avail.

In fact, the water cleanup standard for the Arkwood Superfund site **was** changed by the Hazardous Waste Division — with no input from the Water Division, if I understood Mr. Shafii — by certified letter dated November 6, 2012 from Mark Moix, Engineer, PE, Technical Branch, ADEQ Hazardous Waste Division to Ruben Moya, then-Superfund Remedial Project Manager, EPA Region 6 for the Arkwood site (attached.)

I obtained this letter through Freedom of Information Act requests submitted to EPA.

Please note my objection to the manner in which this matter and my contacts have been treated by Mr. Shafii, Ms. Carpenter, Ms. Hynum and Ms. Clem in my efforts to return the Arkwood Superfund site to appropriate productive use, **which would create jobs to help sustain Arkansans and their families in an economically-challenged part of the State.**

Please do what you can to resolve the discrepancies surrounding the water cleanup goal for Arkwood Superfund site — as detailed below and elsewhere — and to move the site toward productive industrial use, in keeping with the ADEQ Water Division's published Mission Statement:

**"To protect and enhance the water quality of the State of Arkansas in a manner consistent with the economic well being of all Arkansans."**

Sincerely,

Charles Grisham, Junior

Begin forwarded message:

**From:** CC Grisham <[grish@me.com](mailto:grish@me.com)>

**Subject:** Fwd: Arkwood - Pentachlorophenol | Pesticides | US EPA

**Date:** August 22, 2013 at 3:00:28 PM PDT

**Cc:** CC Grisham <[grish@me.com](mailto:grish@me.com)>, Carlos Sanchez <[sanchez.carlos@epa.gov](mailto:sanchez.carlos@epa.gov)>

**To:** Stephen Tzhone <[tzhone.stephen@epa.gov](mailto:tzhone.stephen@epa.gov)>, Tammie Hynum <[HYNUM@adeq.state.ar.us](mailto:HYNUM@adeq.state.ar.us)>

#### ITEM FOR AGENDA - ARKWOOD H2O REMEDIAL GOAL

Please see the below email message from me to Don Williams, EPA Region 6 dated March 24, 2011, on which both Tammie Hynum and Carlos Sanchez were visibly copied; the email text is found at the very bottom of this document.

I am attaching this document to the original email of March 24, 2011 referenced above, with that email's original attachments plus the attachments cited below, and forwarding it all together for completeness.

I pointed out then --- and do so again now --- that EPA's Frank T. Sanders, Director, Antimicrobials Division, in the Reregistration Eligibility Decision for Pentachlorophenol (September 28, 2008 EPA 739-R-08-008, attached) states:

"Surface water runoff from pentachlorophenol treated utility poles may be a possible source for pentachlorophenol or its transformation products in drinking water or in foods. Estimated Environmental Concentrations (EECs) for surface water have been calculated by the Agency. **Drinking water levels of concern (DWLOCs) for acute and chronic dietary risk from drinking water were calculated. DWLOCs calculated for surface water for pentachlorophenol were 10,465 ppb for adult males and females and 2,990 ppb for children ages 1-6.**" (emphasis added)

[Note: 2,990 ppb = 2986.588411 ug/l]

- In a letter (attached) dated January 30, 1998 from Masoud Arjmandi to Jean Mescher, ADEQ **originally set** the Arkwood water cleanup criteria (18.17 ug/l "Daily Maximum", 9.3 ug/l "Monthly Average, pH between 6.0-9.0)
- ADEQ then **revised** the Arkwood water cleanup criteria by letter (attached) dated February 14, 2012 from Sarah Clem, ADEQ Branch Manager, Water Quality Planning, Water Division, ADEQ to Shawn Ghose, EPA RPM for Arkwood, which states in part:

**"Organisms in the effluent discharge stream experience chronic exposure, therefore; the chronic standard of 15.57 ug/l is the appropriate standard for the Arkwood Site."**

- In a letter (attached) dated July 13, 2012 from Mark Moix, Engineer, PE, Technical Branch, Hazardous Waste Division, ADEQ to Stephen L. Tzhone, Remedial Project Manager, EPA Superfund Region 6, Mr. Moix states in part:

**"The Arkansas Department of Environmental Quality - Hazardous Waste Division & Water Division (ADEQ) have reviewed the Groundwater Remediation Summary dated June 2012. The ADEQ concurs with the summary document with the following comments:**

**"(1) Conclusions and Recommendations, p.9: In February 2012, ADEQ sent to EPA a letter with recalculated water quality standards for New Cricket Spring. These limits should be referenced in the proposed recommendations. The text describes these values as cleanup standards. ADEQ recommends in the sixth sentence of this section 'Based on the Arkansas Pollution Control and Ecology Commission's water quality standard for pentachlorophenol (PCP) presented by ADEQ in their February 14, 2012 letter, the chronic standard of 15.57 ug/l is the appropriate standard for the Arkwood Site.' The appropriate standard for this stream is the chronic standard 15.57 ug/l"**

- In a certified letter (attached) dated November 6, 2012 — also from Mark Moix, less than four months later — to Ruben Moya, RPM Superfund, EPA Region 6, Mr. Moix states in part:

**"The Arkansas Department of Environmental Quality - Hazardous Waste Division (ADEQ) has received the Monthly Progress Report - September 2012 for Arkwood, Inc. Site, Omaha, Arkansas dated October 10, 2012. After reviewing the report ADEQ has the following comments:**

**" • According to the email from Jean Mescher, McKesson, dated October 3, 2012 provided with the subject report, samples cannot be obtained 20 feet downstream from the weir as requested by ADEQ during periods of low flow since the effluent "sinks into the subsurface before reaching the culvert". This statement describes the effluent returning to a subsurface status and therefore returning to the state of groundwater. For this reason the Maximum Contaminant Level (MCL) for pentachlorophenol (PCP) of 1.0 ug/l should be used in lieu of the aquatic toxicity standard of 15.57 ug/l which is currently used.**

**" • Due to the concern discussed in Comment 1 above, a review was performed of past correspondence for clarification concerning applicable risk levels. During the review, it was noticed that the ADEQ water quality standard of 15.57 ug/l is apparently being used as the screening level for PCP in lieu of the MCL of 1.0 ug/l. However, this standard pertains to aquatic toxicity only and does not address potential human health concerns. Even as it is apparently assumed that the stream is not a source for potable water, the MCL of 1.0 ug/l should be the applicable screening level for the following reasons:**

“ • Much of the groundwater which rises from the spring and becomes surface water returns to groundwater and appears to migrate offsite, as groundwater.

“ • According to past correspondence, it appears the consensus of the EPA, ADEQ and McKesson, that some groundwater is circumventing the spring and migrating beyond the spring as groundwater.”

- In our telephone conversation of August 22, 2013, Tammie Hynum, Technical Branch Manager, Hazardous Waste Division, ADEQ, Ms. Hynum confirmed that ADEQ had adopted the EPA Maximum Contaminant Level of 1.0 ug/l of pentachlorophenol (PCP) for drinking water and that “a whole group” at ADEQ had formally concurred with Mr. Moix’s certified letter of November 6, 2012.

I find it highly disingenuous and objectionable for Mr. Moix to have claimed in his certified letter dated November 6, 2012 (speaking with authority for the whole of ADEQ) that “.. it was noticed that the ADEQ water quality standard of 15.57 ug/l is apparently being used as the screening level for PCP in lieu of the MCL of 1.0 ug/l.”

This statement (with its awkward use of the passive voice) implies that ADEQ was blithely unaware of these facts. That is patently not the case.

Again, ADEQ sets the standard, it doesn't just happen to notice it. ADEQ is **responsible** for it and has been for at least fifteen (15) years.

Mr. Moix’s certified letter dated November 6, 2012 feigning ignorance of these facts — which are part of the public record — misleads both the EPA and the public. I find this ploy furtive and offensive. I would like to have an explanation from ADEQ management.

Questions for ADEQ management:

- **Why did ADEQ formally attempt to disavow knowledge of the water cleanup standard that was being used at Arkwood prior to November 6, 2012, (going so far as to send a certified letter to EPA, a measure I do not recall having seen before in ADEQ communication with EPA?)**
- Other than Ms. Mescher's anecdotal, unscientific statement, to what statements, tests or other objectively-verifiable evidence is Mr. Moix referring when he claims that affected surface water returns underground and "appears" to migrate offsite?
- Does ADEQ always rely on hearsay subjective “statements” in forming policy, as it has done here?
- Has ADEQ ever performed primary research, data-gathering, or other original scientific investigation first-hand at Arkwood? If so, when and with what result?
- Did ADEQ ever formally communicate to EPA the new ADEQ standard of 1.0 ug/l prior to Mark Moix’s letter of November 6, 2012? If so, when and how?
- To exactly which organisms does Ms. Clem refer in her letter of February 14, 2012, referenced above? What scientific evidence does ADEQ have to establish the existence of such organisms in the affected waters at Arkwood or of their chronic exposure to PCP? I have asked these last two questions of ADEQ in writing years ago, which is a matter of record, but was not answered.
- What is the definition of “groundwater/ surface water interception,” a term Ms. Hynum used in our telephone conversation of August 22, 2013? When I questioned that usage, Ms. Hynum advised me that she is not a professional hydrogeologist.

In Mr. Moix’s eight-paragraph letter of November 6, 2012 Mr. Moix uses some form of the verb “to appear” four times as follows:

“...is apparently being used...”

“...it is apparently assumed...”

“...and appears to migrate offsite...”

“...it appears the consensus of the EPA, ADEQ and McKesson...”

I would submit that all stakeholders should be dealing in *facts*, *not appearances*, especially where a highly-technical and scientifically complex project such as Arkwood is concerned, and most especially where peoples lives and livelihoods are at stake, such as those of my elderly parents and those of our citizens in Boone County, Arkansas who need the jobs this site could provide when reused.

Ms. Mescher addressed the issues raised in Mr. Moix’s certified letter of November 6, 2012 in her letter (attached) to Mr. Moya dated December 18, 2012 (cc’d to Mr. Moix) which states in part:

**“In accordance with Arkansas Regulation 2, “surface water” is defined as, ‘That water contained on the exterior or upper portion of the earth’s surface as opposed to groundwater.’ Using this definition, the effluent discharge is appropriately categorized as surface water.”**

Please see EPA website page (printout attached) regarding “Basic Information about Pentachlorophenol in Drinking Water” found at <http://water.epa.gov/drink/contaminants/basicinformation/pentachlorophenol.cfm> which states in part with regard to pentachlorophenol:

**“Maximum Contaminant Level (MCL) = 0.001 milligrams per Liter (mg/L) or 1 part per billion (ppb)**

**“Maximum Contaminant Level Goal (MCLG) = zero”**

Questions for EPA and ADEQ:

- Is the above EPA-published information that upon which ADEQ is relying in its decision to require that Arkwood affected waters be cleaned to a MCL of 1.0 ug/l?
- Will EPA ratify that the above EPA-published information is in fact that upon which ADEQ **should be** relying in its decision to require that Arkwood affected waters be cleaned to a MCL of 1.0 ug/l?

Background for next question:

On July 28, 2010, Annette Cusher wrote to me in part:

**“At this time, ADEQ has not adopted the Human Health Criteria in EPA’s National Recommended Water Quality Criteria for Pentachlorophenol.”**

Ms. Cusher was referring to the below:

National Recommended Water Quality Criteria: 2002, Human Health Criteria Calculation Matrix EPA Number: 822R02012  
<http://yosemite.epa.gov/water/owrccatalog.nsf/9da204a4b4406ef885256ae0007a79c7/b94d6802c925234285256caa00476de9!OpenDocument>

Which states in part:

**“This document contains information regarding the calculation of the human health criteria contained in the document entitled, National Recommended Water Quality Criteria: 2002. This document provides: cancer potency factors (q1\*s); reference doses (RfDs); relative source contributions (RSCs); fish intake values; and equations used to derive the human health criteria in the aforementioned compilation. This document is not a regulation and cannot substitute for the Clean Water Act or Environmental Protection Agency (EPA) regulations. Thus, the criteria in the calculation matrix cannot impose legally binding requirements on EPA, states, authorized tribes or the regulated community.”**

Question for EPA and ADEQ:

- **What does above mean for Arkwood? Do these criteria apply or not?**

I would like ADEQ and EPA to address and resolve these discrepancies prior to our meeting scheduled for September 5, 2013.

At that time, I hope there will be firm and final agreement between EPA and ADEQ as to:

1. the actual toxicity/ risk to human health posed by pentachlorophenol in surface water, groundwater or drinking water
1. the appropriate remedial goal and testing scenario for PCP at New Cricket Spring --- the only water body to be in current remediation at Arkwood per the Record of Decision --- clearly stated such that, once met and satisfied, the site can be appropriately closed out, deleted from the National Priorities List and returned to productive industrial use as required by law for the benefit of the local and regional economies in Arkansas.

Respectfully submitted,

Charles Curtis Grisham, Junior

Begin forwarded message:

**From:** "[grish.org](http://grish.org)" <[curt@grish.org](mailto:curt@grish.org)>

**Subject:** Arkwood - Pentachlorophenol | Pesticides | US EPA

**Date:** March 24, 2011 11:19:26 PM PDT

**To:** Donald Williams <[Williams.Donald@epamail.epa.gov](mailto:Williams.Donald@epamail.epa.gov)>

**Cc:** "[grish.org](http://grish.org)" <[curt@grish.org](mailto:curt@grish.org)>, "Hynum, Tammie" <[HYNUM@adeq.state.ar.us](mailto:HYNUM@adeq.state.ar.us)>, [Sanchez.Carlos@epamail.epa.gov](mailto:Sanchez.Carlos@epamail.epa.gov)

Don,

Please see the attached EPA document, found at the following link:

<http://www.epa.gov/oppsrrd1/reregistration/pentachlorophenol/>

This is the most compelling evidence I have found that the water issue at Arkwood is in fact a red-herring non-issue, and an exceedingly expensive one at that.

1) Pentachlorophenol for use as a pesticide was re-registered by the EPA in 2008.

Here is an excerpt from the attached EPA "Reregistration Eligibility Decision for Pentachlorophenol (List B Case 2505)" approved by Frank T. Sanders, Director, Antimicrobials Division, on September 28, 2008:

*"Surface water runoff from pentachlorophenol treated utility poles may be a possible source for pentachlorophenol or its transformation products in drinking water or in foods. Estimated Environmental Concentrations (EECs) for surface water have been calculated by the Agency. Drinking water levels of concern (DWLOCs) for acute and chronic dietary risk from drinking water were calculated. DWLOCs calculated for surface water for pentachlorophenol were **10,465 ppb for adult males and females and 2,990 ppb for children ages 1-6.**"* (emphasis added)

2) The Arkansas standard as derived via unknown methodology in 1998 by Masoud Arjmandi, staff engineer at Arkansas Department of Environmental Quality (then called the Arkansas Department of Pollution Control and Ecology), requires concentrations of pentachlorophenol in New Cricket Spring to be less than **9.3 ppb** (see attached letter which was included in Mr. Ghose's draft 3rd Five-Year Review).

3) The yearly averages of pentachlorophenol concentrations in New Cricket Spring (according to data presented by Mr. Ghose in his draft 3rd Five-Year Review) range between a **high of 670 ppb** (1996, the first year of sampling, based upon two samples for the whole year) and a **low of 13 ppb** (2009).

The highest concentration of pentachlorophenol in New Cricket Spring ever recorded for any single sample was the extremely anomalous reading of **1190 ppb** from October 22, 2007. This reading was 548% higher than the next-highest reading for all of 2007 (217 ppb, also anomalous within the dataset) and therefore of dubious reliability.

Even so, this highest-ever recorded concentration of pentachlorophenol in New Cricket Spring is **less than one-eighth** of the EPA drinking water level of concern for adults and **less than one-half** the drinking water level of concern for children ages 1-6 for acute and chronic dietary risk from drinking water as expressed in the 2008 EPA reregistration document cited above.

4) New Cricket Spring has never been a source of drinking water. Pentachlorophenol from the Arkwood site has never impacted **any** source of drinking water.

Thank you,

Curt Grisham